This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1   1. (previously presented) A data management method, comprising:

2   backing up contents of a source device at a first client station as at least one object

3   of a database stored in a data storage subsystem wherein the at least one object represents

4   an image of the contents of the source device and wherein the image of the contents of

5   the source device includes a plurality of files and a file directory of the source device;

6   using the database, tracking attributes and location of the at least one object in the

7   database;

8   using the at least one object, restoring the contents of the source device from the at

9   least one object to a target file in a file system stored on a storage device so that the

10   target file contains said contents of the source device including said plurality of files and

11   said file directory of the source device, wherein said file system comprises a plurality of

12   files and an address table identifying the location of each file on said storage device; and

13   copying the restored contents of the source device from the target file to a target

14   device so that the target device contains the contents of the source device including said

15   plurality of files of the source device and said file directory of the source device.

1   2. (previously presented) The method of claim 1 wherein the target file is stored

2   on storage media at a second client station.

1   3. (previously presented) The method of claim 1 wherein the target file contains

2   the complete contents of the source device.

1   4. (cancelled)

1   5. (original)   The method of claim 1 wherein the data storage subsystem includes

2   a server coupled to the first client station by a network.

1   6. (original)   The method of claim 1 further comprising, using the at least one

2   object, restoring the contents of the source device from the at least one object to a target

3   device so that the target device contains the contents of the source device.

1   7. (original)   The method of claim 1 wherein the source device is a raw storage

2   device.

1   8. (original)   The method of claim 7 wherein the source raw storage device is a

2   logical volume of at least one magnetic disk drive.

1   9. (previously presented)   The method of claim 7 wherein the source raw storage

2   device is a partition of a magnetic disk drive.

1   10. (original)   The method of claim 1 further comprising mounting the source

2   device as a read only device wherein write operations to said source device are prevented

3   during said backing up of said source device.

1   11. (previously presented)   The method of claim 1 wherein said target file is a flat

2   file.

1   12. (original)   The method of claim 1 wherein said copying uses the UNIX dd

2   command.

1   13-36. (cancelled)

1   37. (new) An article of manufacture for data management, wherein the article of

2   manufacture causes operations to be performed, the operations comprising:

3   backing up contents of a source device at a first client station as at least one object

4   of a database stored in a data storage subsystem wherein the at least one object represents

5   an image of the contents of the source device and wherein the image of the contents of

6   the source device includes a plurality of files and a file directory of the source device;

7   using the database, tracking attributes and location of the at least one object in the

8   database;

9   using the at least one object, restoring the contents of the source device from the at

10   least one object to a target file in a file system stored on a storage device so that the

11   target file contains said contents of the source device including said plurality of files and

12   said file directory of the source device, said file system comprising a plurality of files and

13   an address table identifying the location of each file on said storage device; and

14   copying the restored contents of the source device from the target file to a target

15   device so that the target device contains the contents of the source device including said

16   plurality of files of the source device and said file directory of the source device.

1   38. (new) The article of manufacture of claim 37 wherein the target file is stored

2   on storage media at a second client station.

1   39. (new) The article of manufacture of claim 37 wherein the target file contains

2   the complete contents of the source device.

1   40. (new) The article of manufacture of claim 37 wherein the data storage

2   subsystem includes a server coupled to the first client station by a network.

1   41. (new) The article of manufacture of claim 37 wherein the operations further

2   comprise:

3 using the at least one object, restoring the contents of the source device from the at

4 least one object to a target device so that the target device contains the contents of the

5 source device.

1 42. (new) The article of manufacture of claim 37 wherein the source device is a

2 raw storage device.

1 43. (new) The article of manufacture of claim 42 wherein the source raw storage

2 device is a logical volume of at least one magnetic disk drive.

1 44. (new) The article of manufacture of claim 42 wherein the source raw storage

2 device is a partition of a magnetic disk drive.

1 45. (new) The article of manufacture of claim 37 wherein the operations further

2 comprise:

3 mounting the source device as a read only device wherein write operations to said

4 source device are prevented during said backing up of said source device.

1 46. (new) The article of manufacture of claim 37 wherein said target file is a flat

2 file.

1 47. (new) The article of manufacture of claim 37 wherein said copying uses the

2 UNIX dd command.

1 48. (new) A subsystem for managing data for use with a plurality of client

2 stations coupled together by a network, said client stations including a source client

3 station having a source device and a target client station having a target device storing a

4   file system comprising a plurality of files and an address table identifying the location of

5   each of said plurality of files, comprising:

6   a data storage device having a database comprising a plurality of objects;

7   a digital data processing apparatus coupled to the storage device, wherein the

8   digital data processing apparatus is programmed to perform a data management method,

9   said method comprising:

10   backing up contents of a source device at a source client station as at least

11   one object of said database stored in said data storage device wherein the at least

12   one object represents an image of the contents of the source device and wherein

13   the image of the contents of the source device includes a plurality of files and a

14   file directory of the source device;

15   using the database, tracking attributes and location of the at least one

16   object in the database;

17   using the at least one object, restoring the contents of the source device

18   from the at least one object to a target file in said file system stored on a target

19   device of a target client station so that the target file contains said contents of the

20   source device including said plurality of files and said file directory of the source

21   device; and

22   copying the restored contents of the source device from the target file to a

23   target device of a target client station so that the target client station contains the

24   contents of the source device including said plurality of files of the source device

25   and said file directory of the source device.

1   49. (new) The subsystem of claim 48 wherein the target file is stored on a target

2   device of a target client station different from said source client station.

1   50. (new) The subsystem of claim 48 wherein the target file contains the

2   complete contents of the source device.

1   51. (new) The subsystem of claim 48 wherein the digital data processing

2 apparatus includes a server coupled to the first client station by said network.

1   52. (new) The subsystem of claim 48 wherein said method further comprises:

2   further comprising, using the at least one object, restoring the contents of the

3 source device from the at least one object to a target device so that the target device

4 contains the contents of the source device.

1   53. (new) The subsystem of claim 48 wherein the source device is a raw storage

2 device.

1   54. (new) The subsystem of claim 53 wherein the source client station has a

2 magnetic disk drive and wherein the source raw storage device is a logical volume of

3 said magnetic disk drive.

1   55. (new) The subsystem of claim 53 wherein the source client station has a

2 magnetic disk drive and the source raw storage device is a partition of said magnetic disk

3 drive.

1   56. (new) The subsystem of claim 48 wherein said method further comprises:

2   mounting the source device as a read only device wherein write operations to said

3 source device are prevented during said backing up of said source device.

1   57. (new) The subsystem of claim 48 wherein said target file is a flat file.

1   58. (new) The subsystem of claim 48 wherein said copying uses the UNIX dd

2   command.

1   59. (new) A data management method, comprising:

2   mounting a   source device as a read only device wherein write operations to said

3   source device are prevented during backing up of said source device

4   backing up the complete contents of said source device at a first client station as

5   at least one object of a database stored in a data storage subsystem which includes a

6   server coupled to the first client station by a network wherein the at least one object

7   represents an image of the contents of the source device and wherein the image of the

8   complete contents of the source device includes a plurality of files and a file directory of

9   the source device;

10   using the database, tracking attributes and location of the at least one object in the

11   database;

12   if a target device is available, using the at least one object, restoring the contents of

13   the source device from the at least one object to said target device;

14   if said target device is not available, using the at least one object, restoring the

15   contents of the source device from the at least one object to a flat target file in a file

16   system stored on a storage device at a second client station so that the flat target file

17   contains said complete contents of the source device including said plurality of files and

18   said file directory of the source device, wherein said file system comprises a plurality of

19   files and an address table identifying the location of each file on said storage device; and

20   copying the restored complete contents of the source device from the flat target

21   file using the UNIX dd command to said target device when available so that the target

22   device contains the complete contents of the source device including said plurality of

23   files of the source device and said file directory of the source device.